

***Amendments to the Claims:***

This listing of claims will replace all prior versions, and listings, of claims in the above-captioned application.

**Listing of Claims:**

1. (currently amended) An instrumented antifriction bearing device comprising:  
  
\_\_\_\_\_ a rotating portion;  
  
\_\_\_\_\_ a nonrotating portion; and  
  
an assembly configured to for detecting rotation parameters, wherein the assembly comprises: comprising  
  
\_\_\_\_\_ an encoder (8); and  
  
a sensor-(7), wherein the sensor is integrated integral with said the nonrotating portion, and wherein the sensor comprises: provided with  
  
a sensor unit; and (10), characterized in that the sensor comprises  
  
at least one microcoil (20), wherein a microcoil is a with substantially flat winding, and wherein the

microcoil is positioned ~~placed on a support (17) of a circuit (18) that is mounted coupled to in the sensor unit (10) of the nonrotating portion, and wherein such that said the microcoil comes is configured to be positioned~~ axially opposite the encoder (8).

2. (currently amended) The device ~~as claimed in of~~ claim 1, ~~characterized in that it comprises~~ further comprising a plurality of substantially radial coplanar reception microcoils.
3. (currently amended) The device ~~as claimed in of~~ claim 1, ~~characterized in that it comprises~~ further comprising a plurality of reception microcoils ~~placed positioned~~ on a plurality of substantially parallel radial planes.
4. (currently amended) The device ~~as claimed in any one of the preceding claims of claim 1,~~ ~~characterized in that it comprises~~ further comprising a transmission coil (19) ~~placed positioned~~ in the sensor unit.
5. (currently amended) The device ~~as claimed in any one of the preceding claims of claim 1,~~ ~~characterized in that~~ further comprising:

\_\_\_\_\_ at least one transmission coil;

\_\_\_\_\_ at least one reception coil; and

\_\_\_\_\_ a data processing circuit; ~~(18) are placed on the support.~~

wherein a transmission coil, a reception coil, and a data processing circuit are positioned on the support.

6. (currently amended) The device ~~as claimed in any one of the preceding claims~~of claim 1, characterized in that it ~~comprises~~ further comprising a plurality of microcoils linked together in pairs, ~~(24, 25)~~ and wherein the linking microcoils are configured in order to generate a differential signal.
7. (currently amended) The device ~~as claimed in any one of the preceding claims~~of claim 1, characterized in that wherein the encoder comprises an encoder wheel, and wherein the encoder wheel comprises an ~~whose~~ active zone, and wherein the active zone comprises is ~~made of~~ an electrically conducting metal.
8. (currently amended) The device ~~as claimed in any one of the preceding claims~~of claim 1, characterized in that wherein the encoder comprises an encoder wheel, and wherein the encoder wheel comprises ~~with windows, or with teeth attached to a rotating race (3) of the antifriction bearing.~~
9. (currently amended) The device ~~as claimed in any one of claims 1 to 7~~of claim 1, characterized in that wherein the encoder comprises a printed circuit, and wherein the printed circuit comprises ~~whose an~~ annular substrate ~~is provided~~ with metallized sectors and nonmetallized sectors.
10. (currently amended) The device ~~as claimed in~~of claim 9, characterized in that wherein the printed circuit is ~~mounted~~ coupled to ~~on~~ a rotating ~~race~~track of the antifriction bearing.

11. (currently amended) The device ~~as claimed in any one of the preceding claims~~ of claim 1, characterized in that wherein at least one portion of the encoder is ~~placed~~ positioned in the space ~~situated~~ between the antifriction bearing ~~racetracks~~.
12. (currently amended) The device ~~as claimed in any one of the preceding claims~~ of claim 1, characterized in that wherein the encoder is ~~placed~~ positioned outside the space ~~situated~~ between the antifriction bearing ~~racetracks~~.
13. (currently amended) The device ~~as claimed in any one of the preceding claims~~ of claim 1, characterized ~~wherein~~ in that the sensor unit is substantially annular.
14. (currently amended) The device ~~as claimed in any one of claims 1 to 12~~ of claim 1, characterized in that wherein the sensor unit occupies an angular sector of less than approximately 360°.
15. (currently amended) An electric motor comprising:  
  
\_\_\_\_\_ a rotor;  
  
\_\_\_\_\_ a stator;  
  
at least one antifriction bearing, ~~(1)~~ wherein an antifriction bearing  
is configured to supporting the rotor; and  
  
\_\_\_\_\_ a sensor assembly comprising:  
  
\_\_\_\_\_ an encoder ~~(8)~~; and

a sensor ~~(7)~~, characterized in that wherein the sensor ~~(7)~~  
comprises:

at least one microcoil, ~~(20)~~ wherein a microcoil  
comprises an with essentially flat winding, and  
wherein a microcoil is positioned ~~placed~~ on a  
support ~~(17)~~ of a circuit ~~(18)~~ mounted coupled to in  
the sensor unit ~~(10)~~ integral integrated with the  
stator such that the microcoil ~~comes~~ is positionable  
axially opposite the encoder.

16. (new) The device of claim 1, wherein the encoder comprises an encoder wheel, and  
wherein the encoder wheel comprises teeth coupled to a rotating groove of the antifriction  
bearing.